

WHAT IS CLAIMED IS:

1                   1       A method of displaying nodes within a network topology, the method  
 2       using a processor coupled to a display screen, the method comprising:  
 3                   forming a first layer of a multi-layer representation wherein at least two nodes  
 4       are represented separately;  
 5                   grouping the nodes of the first layer into group nodes to form a second layer in  
 6       the multi-layer representation;  
 7                   grouping the group nodes of the second layer into a third layer, the third layer  
 8       having at least one connected-superset node containing group nodes with nodes connected to  
 9       each other, and at least one isolated-superset node containing group nodes having nodes  
 10      isolated from each other; and  
 11                   displaying the superset nodes in the third layer so the connected-superset node  
 12      is separate from the isolated-superset node and such that the connected-superset node is  
 13      selectively expandable to display group nodes and connections between the nodes, and the  
 14      isolated-superset node is selectively expandable to display group nodes of the second layer.

1                   2.       The method of claim 1, wherein the step of forming comprises a step  
 2      of creating a graph of nodes to be displayed in the network as a leaf graph.

1                   3.       The method of claim 2, wherein the leaf graph includes components  
 2      and interconnection paths of the network.

1                   4.       The method of claim 1 wherein the group nodes in the connected-  
 2      superset node are laid out according to layout rules.

1                   5.       The method of claim 4 wherein the group nodes in the connected-  
 2      superset node comprises any one or more of switch groups and host groups.

1                   6.       The method of claim 5 wherein a layout rule consists of the switch  
 2      group with the highest connectivity being placed in the center of the connected-superset node.

1                   7.       The method of claim 1 wherein the connected-superset node is fully  
 2      expandable while the isolated-superset node is minimized.

1                   8.       The method of claim 1 wherein the isolated-superset node comprises  
 2      any one or more of unmapped hubs and isolated switches.

1           9.     The method of claim 1 wherein the isolated group node consists of  
2 isolated devices other than unmapped hubs and isolated switches.

1           10.    A method of displaying nodes within a network topology, the method  
2 using a processor coupled to a display screen, the method comprising:

3               forming a first layer of a multi-layer representation wherein at least two nodes  
4 are represented separately;

5               grouping the nodes of the first layer into group nodes to form a second layer in  
6 the multi-layer representation;

7               grouping the group nodes of the second layer into a third layer, the third layer  
8 having at least one connected-superset node containing group nodes with nodes connected to  
9 each other, but not connected to any other nodes belonging to other connected-superset  
10 nodes; and

11              displaying the connected-superset node in the third layer such that the  
12 connected-superset node is selectively expandable to display group nodes and connections  
13 between the nodes.

1           11.    The method of claim 10 wherein grouping the group nodes of the  
2 second layer into a third layer further comprises, the third layer having at least one isolated  
3 superset node containing group nodes having nodes isolated from each other; and

4               displaying the superset nodes in the third layer so the connected-superset node  
5 is separate from the isolated-superset node and such that the connected-superset node is  
6 selectively expandable to display group nodes and connections between the nodes, and the  
7 isolated-superset node is selectively expandable to display group nodes of the second layer.

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